



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,391	02/27/2004	Kazuhiro Mino	Q80124	4819
23373 7590 04/10/2008				
SUGHRUE MION, PLLC				
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800				
WASHINGTON, DC 20037				
EXAMINER				
YEH, EUENG NAN				
ART UNIT		PAPER NUMBER		
2624				
MAIL DATE		DELIVERY MODE		
04/10/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/787,391

**Applicant(s)**

MINO ET AL.

**Examiner**

EUENG-NAN YEH

**Art Unit**

2624

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-7,9,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7, 9,11, and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**FINAL ACTION**

***Response to Amendment***

1. The following Office Action is responsive to the amendment and remarks received on January 25, 2008. Original claims 3, 8, and 10 were canceled and claims 11-12 are added. Newly added claims 11-12 and claims 1-2, 4-7, and 9 remain pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5-7, 9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rhoads (US 6,411,725 B1) and Narayanaswami et al. (U.S. 2003/0011684 A1).

Regarding claims 1, 7, and 9, Rhoads discloses an information attaching system comprising:  
information attaching means for attaching different information to each of a plurality of regions in said image that respectively contain said plurality of photographed objects (as depicted in figure 1A, numerals 100 and 102: "... convey auxiliary information 100 about video objects in the content. An embedding process 102 encodes the auxiliary information into a watermark embedded in the video content..." at column 4, line 7; see

also figure 4, illustrates an embedding process for encoding auxiliary information about video objects in a video stream: "... location of two or more video objects by drawing a boundary around the desired video objects in a video sequence. The encoding process records the screen location information for each object in the relevant frames and associates it with the auxiliary information provided by the user ..." at column 8, line 20), and

acquiring said information-attached image (as depicted in figure 4, numeral 404: "... watermark encoding process 404 encodes the auxiliary information into the content ..." at column 8, line 13);

input means for receiving image data obtained by an image reproducing medium, on which the information-attached image acquired by the information attaching means is reproduced, with image pick-up means ("as depicted in Rhoads figure 1A, numerals 106 and 108: "...receiver 106 captures the video content and places it in a format from which a watermark decoder 108 extracts the auxiliary information ..." at column 4, line 13; see also figure 7, illustrates the decoding processes for extracting watermark information from video content. Thus, the captured video, i.e. the received image data, is an information-attached image. See also "In FIG. 2, physical objects 200 are pre-watermarked in a manner that survives the video capture process 202. For an example of a watermarking process that survives digital to analog conversion (e.g., printing a digital image on a physical object), and then analog to digital conversion (e.g., capture via a video camera) ... The resulting video is then transmitted or broadcast 204" at column 7, line 29); and

detection means for detecting said information from said image data for each of said plurality of objects contained in said information-attached image (as depicted in figure 7, numeral 702: "decoding auxiliary information embedded in a watermark in the video content ..." at column 11, line 2. The plurality of objects was discussed in claim 1).

Rhoads discloses the information attaching process for plurality of objects and detecting the information through transmission as depicted in figure 1A, numeral 104.

Rhoads does not explicitly disclose the transmitted image data can be a photographed image data.

Narayanaswami, in the same field of endeavor of digital image verification("... for verifying the authenticity of the digital images" in paragraph 2, line 6), teaches a digital image capturing system as depicted in figure 1, numeral 100: "the system 100 of FIG. 1 is a camera (which is capable of capturing still and /or video images) ... FIG. 1 is not limited to a camera, but may be embedded in other CPU based systems such as a portable computer or any PDA ..." in paragraph 32, line 6.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to enhance the information attaching/detecting system Rhoads made with photographing image data capture capability as taught by Narayanaswami, so the image data transmission will not limit to broadcast, electronic file download over a network, streaming delivery over a network, etc.

Regarding claim 2, information attaching means is means for acquiring said information-attached image by hidden embedding said information in said image (as

depicted in figure 4, numeral 404 "...watermark encoding process 404 encodes the auxiliary information into the content. ..." at Rhoads column 8, line 13).

Regarding claim 5, image pick-up means is a camera provided in a portable terminal (discussed in claim 3, as depicted in Narayanaswami figure 1, numeral 100: "FIG. 1 is a camera (which is capable of capturing still and /or video images) ... FIG. 1 is not limited to a camera, but may be embedded in other CPU based systems such as a portable computer or any PDA ..." in paragraph 32, line 7).

Regarding claim 6, said information is location information representing storage locations of audio data correlated with said plurality of photographed objects ("Another aspect of the invention is a method for using a watermark that has been encoded into a video signal ... The watermark may include a direct (e.g., URL or network address) or indirect link (e.g., object identifier) to the web site ..." at Rhoads column 2, line 35), and which further comprises audio data acquisition means for acquiring said audio data, based on said location information (as depicted in Rhoads figure 1A, numeral 114: "a user interface 114 executes and provides visual, audio, or audio-visual information to the user ... user interface receives input from the user, selecting a video object. In response, it performs an action associated with the selected object using the auxiliary object information decoded from the watermark ..." at column 4, line 17. See also "The watermark may carry information or programmatic action. It may also link to external information or an action, such as retrieval and output of information stored elsewhere in

a database, website, etc. Watermark linking enables the action associated with the watermark to be dynamic ..." at column 4, line 29).

Regarding claim 11, the information device according to claim 1, further comprising:

a mobile communication terminal having a camera (as depicted in Narayanaswami figure 1: "the system 100 of FIG. 1 is a camera (which is capable of capturing still and/or video images) ... It is to be understood, however, by one of ordinary skill in the art that the system of FIG. 1 is not limited to a camera, but may be embedded in other CPU based systems such as a portable computer or any PDA device having the components (to be described below) of the system 100, as well as other conventional camera components such as a photographic lens for capturing images" in paragraph 32, line 6);  
a server (as depicted in Rhoads figure 8, numeral 802 is a server);

wherein the camera of the mobile terminal photographs the image reproducing medium (discussed in claim 1 the input means for wherein portable computer or any PDA can be used to photograph image through D/A and/or A/D conversion);

wherein the input means and the detecting means are disposed in the server (as depicted in Rhoads figure 8, the server #802 receives input and parses and extracts to detect information: "The server, in response to receiving the message (828), parses it and extracts an index used to look up a corresponding action in a database (830) that associates many such indices to corresponding actions ..." at Rhoads column 14, line 44).

Regarding claim 12, wherein the information is a location of audio data and the server acquires said audio data using said location and transmits said audio data to said mobile communication terminal (the combination of Rhoads and Narayanaswami teaches the mobile terminal about the location: "watermark may include a direct (e.g., URL or network address) or indirect link (e.g., object identifier) to the web site ..." at Rhoads column 2, line 44, to get audio data: "user interface 114 (*Rhoads figure 1A*) executes and provides visual, audio, or audio-visual information to the user ... user interface receives input from the user, selecting a video object. In response, it performs an action associated with the selected object ..." at column 4, line 17. Furthermore, "The server, in response to receiving the message (828) (*Rhoads figure 8*), parses it and extracts an index used to look up a corresponding action in a database (830) that associates many such indices to corresponding actions ..." at Rhoads column 14, line 44).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rhoads and Narayanaswami as applied to claim 1 discussed above, and further in view of Motta et al. (US 6,726,103 B1).

The Rhoads and Narayanaswami combination discloses an information attaching/detecting system with image pick-up means to receive photographed-image data.



The Rhoads and Narayanaswami combination does not explicitly disclose a way to correct the geometrical distorted photographed-image data.

Motta, in the same field of endeavor of digital imaging ("relates to the field of image sensors and imaging systems" at column 1, line 8), teaches a geometric correction processing system for the photographed-image data as depicted in figure 3. "Data processing may include but is not limited to data interpolation, noise reduction, color adjustment, and/or geometric corrections due to optical aberrations ..." at column 4, line 4.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the information attaching/detecting system made by Rhoads and Narayanaswami combination with the geometrical distortion correction processor as taught by Motta, in order to provide "A system that can self test, detect errors, and correct such errors ... and would be of great value to many businesses and industries" at column 2, line 29.

### ***Response to Arguments***

#### **a. Summary of Applicant's Remark:**

The previous drawing, specification and claim objections should be withdrawn in view of the amendment.

#### **Examiner's Response:**

Examiner agrees, and the previous objections are withdrawn.

b. Summary of Applicant's Remarks:

"Rhoads merely describes receiving transmitted content. Neither the portions cited by the Examiner nor any other portion of Rhoads discloses photographing an image reproducing medium on which an information-attached image acquired by an information attaching devices is reproduced. Rather, Rhoads merely contemplates transmitting and receiving video content, not photographing an image reproducing medium" at response page 10, line 3.

Examiner's Response:

It is the Rhoads (US 6,411,725 B1) and Narayanaswami et al. (U.S. 2003/0011684 A1) combination teaches the portable terminal and image photographing. Refer to the rejections above.

***Conclusion***

5. Applicant's amendment is rejected in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eueng-nan Yeh whose telephone number is 571-270-1586. The examiner can normally be reached on Monday-Friday 8AM-4:30PM EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2624

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eueng-nan Yeh  
Assistant Patent Examiner  
2624

/E.Y./

/Vikkram Bali/

Supervisory Patent Examiner, Art Unit 2624